

## WHAT IS CLAIMED IS:

1. A heat exchanger in which heat transfer coils penetrate through a row of multiple plate-shaped heat transfer fins set at a specified fin pitch and in which air is supplied orthogonally to said heat transfer coils, characterized by a configuration so as to satisfy the correlation expressed by the following numerical formula:

$$W_s (1 - 0.1 (6 - N)) \times W_f / (2N + 1)$$

where,  $W_s$  = width of each slit formed on said heat transfer fins,  $W_f$  = width of a heat transfer fin, and  $N$  = the number of slit arrays formed on said heat transfer fin / number of heat transfer fin units.

2. A heat exchanger in which heat transfer coils penetrate through a row of multiple plate-shaped heat transfer fins set at a specified fin pitch and in which air is supplied orthogonally to said heat transfer coils, characterized by a configuration in which the width of each slit formed orthogonal to the air flow on each heat transfer fin is set within a range of 0.17 - 0.29 times the diameter of the heat transfer coils.

3. A heat exchanger in which heat transfer coils penetrate through a row of multiple plate-shaped heat transfer fins set at a specified fin pitch and in which air is supplied orthogonally to said heat transfer coils, characterized by a configuration in which the spacing between slits formed on the heat transfer fins is set within a range of 0.18 - 0.5 times the diameter of the heat transfer coils.

4. A heat exchanger in which heat transfer coils penetrate through a row of multiple plate-shaped heat transfer fins set at a specified fin pitch and in which air is supplied orthogonally to said heat transfer coils, characterized by a configuration in which the width of each slit formed on each heat transfer fin is set within a range of 0.17 - 0.29 times the diameter of the heat transfer coils, and the spacing between slits formed on the heat

transfer fins is set within a range of 0.18 - 0.5 times the diameter of the heat transfer coils.

5. A heat exchanger in which heat transfer coils penetrate through a row of multiple plate-shaped heat transfer fins set at a specified fin pitch and in which air is supplied orthogonally to said heat transfer coils, characterized by a configuration such that within the plural number of slit arrays formed on a heat transfer fin, for a given slit array the slit formed on either edge of a heat transfer fin is partitioned into slits of different length, and the position at which the slit is partitioned is staggered on each of the two edges of the heat transfer fin.